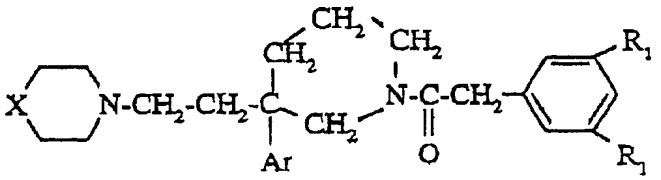
CLAIMS

1. Compound of formula:



(I)

in which:

- X represents a group  ; a group  ;
- Ar represents a phenyl monosubstituted or disubstituted with a halogen atom; a (C_1-C_3)alkyl;
- R_1 represents a chlorine atom, a bromine atom, a (C_1-C_3)alkyl or a trifluoromethyl;
- R_2 represents a group $-CR_3R_4CONR_5R_6$;
- R_3 and R_4 represent the same radical chosen from a methyl, an ethyl, an n-propyl or an n-butyl;
- or alternatively R_3 and R_4, together with the carbon atom to which they are attached, constitute a (C_3-C_6)cycloalkyl;
- R_5 and R_6 each independently represent a hydrogen; a (C_1-C_3)alkyl;
- or alternatively R_5 and R_6, together with the nitrogen atom to which they are attached, constitute a heterocyclic radical chosen from 1-azetidinyl, 1-pyrrolidinyl, 1-piperidyl, 4-morpholinyl,

4-thiomorpholinyl or perhydro-1-azepinyl;

and the salts thereof with inorganic or organic acids, and the solvates and/or hydrates thereof.

2. Compound according to Claim 1, in which Ar represents a 3,4-dichlorophenyl or a 3,4-dimethylphenyl.

3. Compound according to Claim 1, in which the substituents R_1 represent a chlorine atom, a methyl, an ethyl or a trifluoromethyl.

4. Compound according to Claim 1, in which X represents a group $R_2-N<$ in which R_2 represents a group $-CR_3R_4CONR_5R_6$.

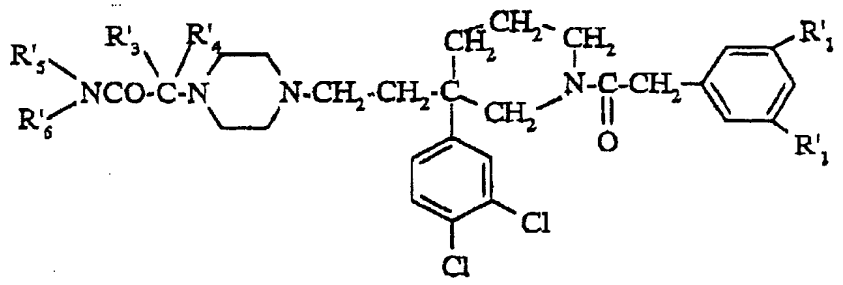
5. Compound according to Claim 4, in which R_3 and R_4 each represent a methyl or, together with the carbon atom to which they are attached, constitute a cyclohexyl.

6. Compound according to Claim 1, in which X represents a group $R_2-CH<$ in which R_2 represents a group $-CR_3R_4CONR_5R_6$.

7. Compound according to Claim 6, in which R_3 and R_4 each represent a methyl or, together with the carbon atom to which they are attached, constitute a cyclohexyl or a cyclopropyl.

8. Compound according to Claim 4 or Claim 6, in which R_5 and R_6 each represent hydrogen or a methyl.

9. Compound according to Claim 1, of formula:



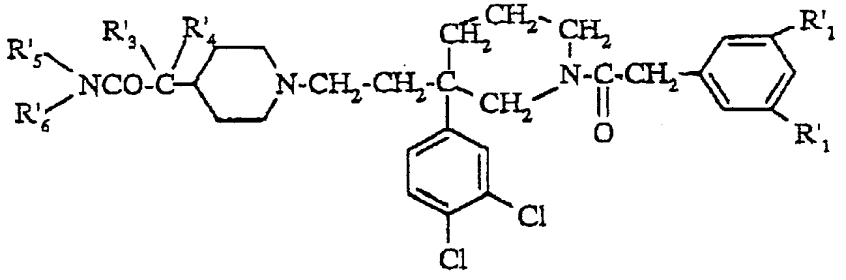
(I')

in which:

- R'_1 represents a chlorine atom, a methyl, an ethyl or a trifluoromethyl;
- R'_3 and R'_4 each represent a methyl or alternatively, together with the carbon atom to which they are attached, constitute a cyclohexyl;
- R'_5 and R'_6 each represent hydrogen or a methyl;

and the salts thereof with inorganic or organic acids, and the solvates and/or hydrates thereof.

10. Compound according to Claim 1, of formula:



(I")

in which:

- R'_1 represents a chlorine atom, a methyl, an ethyl or a trifluoromethyl;

- R'_3 and R'_4 each represent a methyl or alternatively, together with the carbon atom to which they are attached, constitute a cyclohexyl or cyclopropyl;

- R'_5 and R'_6 each represent hydrogen or a methyl;

and the salts thereof with inorganic or organic acids, and the solvates and/or hydrates thereof.

11. Compound according to any one of Claims 1 to 10, of formula (I), (I') or (I»), in optically pure form.

12. 3-[2-[4-(1-Carbamoyl-1-methylethyl)-1-piperidyl]ethyl]-3-(3,4-dichlorophenyl)-1-[2-(3,5-dimethylphenyl)acetyl]piperidine, (-) isomer, the salts thereof and the solvates and/or hydrates thereof.

13. 3-[2-[4-(1-N,N-dimethylcarbamoyl-1-methylethyl)-1-piperidyl]ethyl]-3-(3,4-dichlorophenyl)-1-[2-(3,5-dimethylphenyl)acetyl]piperidine, (-) isomer, the salts thereof and the solvates and/or hydrates thereof.

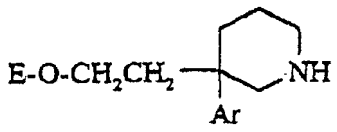
14. 3-[2-[4-(1-Carbamoyl-1-methylethyl)-1-piperidyl]ethyl]-3-(3,4-dichlorophenyl)-1-[2-(3,5-diethylphenyl)acetyl]piperidine, (-) isomer, the salts

thereof and the solvates and/or hydrates thereof.

15. 3-[2-[4-(1-Carbamoyl-1-methylethyl)-1-piperidyl]ethyl]-3-(3,4-dichlorophenyl)-1-[2-[3,5-bis(trifluoromethyl)phenyl]acetyl]piperidine, (+) isomer, the salts thereof and the solvates and/or hydrates thereof.

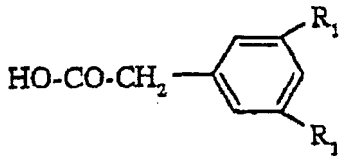
16. Process for preparing the compounds of formula (I) according to Claim 1, the salts thereof and the solvates and/or hydrates thereof, characterized in that:

1a) a compound of formula:



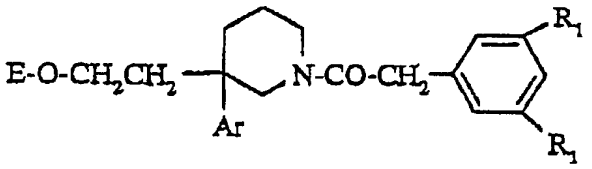
(II)

in which Ar is as defined for a compound of formula (I) in Claim 1 and E represents hydrogen or an O-protecting group, is treated with a functional derivative of an acid of formula:



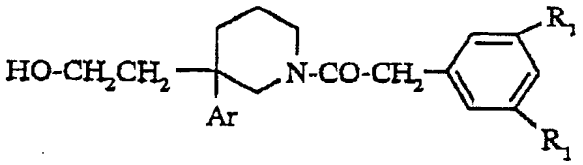
(III)

in which R_1 is as defined for a compound of formula (I) in Claim 1, to give a compound of formula:



(IV) ;

2a) optionally, when E represents a protecting group, it is removed by the action of an acid or a base, to give the alcohol of formula:

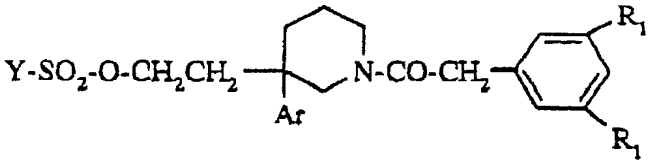


(IV, E = H) ;

3a) the alcohol obtained in step 1a) or in step 2a) of formula (IV, E = H) is treated with a compound of formula:

$$Y\text{-}SO_2\text{-}Cl \qquad (V)$$

in which Y represents a methyl, phenyl, tolyl or trifluoromethyl group, to give a compound of formula:



(VI) ;

4a) the compound of formula (VI) is reacted with a compound of formula:

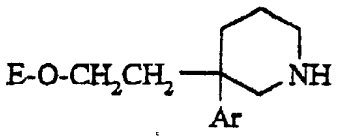
(VII)

in which X is as defined for a compound of formula (I) in Claim 1;

5a) and, optionally, the compound thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

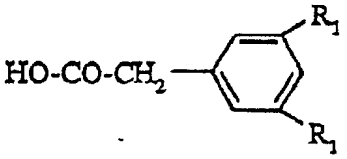
17. Process for preparing the compounds of formula (I) according to Claim 1, the salts thereof and the solvates and/or hydrates thereof, characterized in that:

1b) the compound of formula:



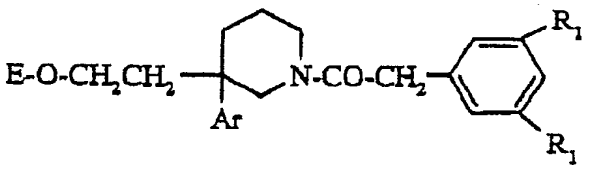
(II)

in which Ar is as defined for a compound of formula (I) in Claim 1 and E represents hydrogen or an O-protecting group, is treated with a functional derivative of an acid of formula:



(III)

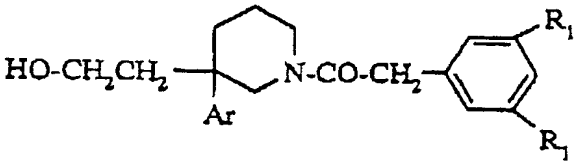
in which R_1 is as defined for a compound of formula (I) in Claim 1, to give a compound of formula:



(IV) ;

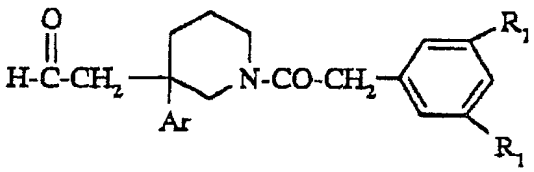
optionally, when E represents a protecting group, it is

removed by the action of an acid or a base, to give the alcohol of formula:



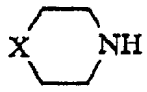
(IV, E = H) ;

2b) the compound of formula (IV, E = H) thus obtained is oxidized in order to prepare a compound of formula:



(VIII)

3b) the compound of formula (VIII) is reacted with a compound of formula:



(VII)

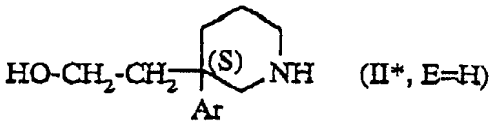
in which X is as defined for a compound of formula (I) in Claim 1, in the presence of an acid, followed by reduction of the intermediate iminium salt formed by means of a reducing agent;

4b) and, optionally, the compound thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

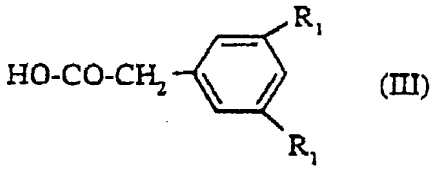
18. Stereospecific process for preparing the compounds of formula (I) according to Claim 1 having the

(S) configuration, the salts thereof and the solvates and/or hydrates thereof, characterized in that:

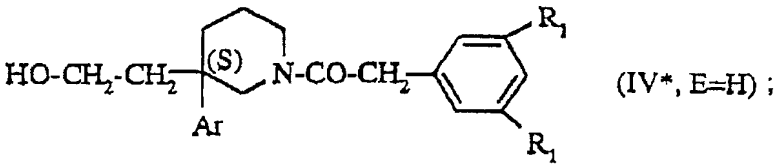
1d) the (S) isomer of a compound of formula:



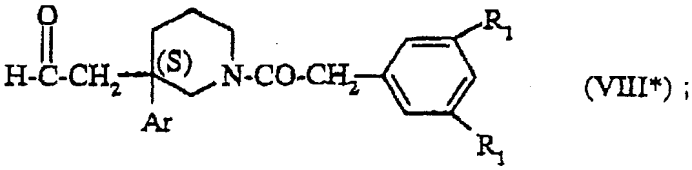
in which Ar is as defined for a compound of formula (I) in Claim 1, is treated with a functional derivative of the acid of formula:



in which R_1 is as defined for a compound of formula (I) in Claim 1, to give a compound of formula:



2d) the compound of formula (IV*) is oxidized to give a compound of formula:



3d) the compound of formula (VIII*) is reacted with a compound of formula:

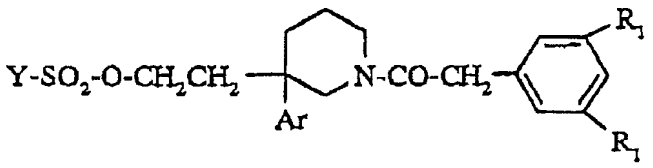
(VII);

in which X is as defined for a compound of formula (I) in Claim 1, in the presence of an acid, followed by reduction of the intermediate iminium salt formed by means of a reducing agent;

4d) and, optionally, the compound thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

19. Process for preparing the compounds of formula (I) according to Claim 1, the salts thereof and the solvates and/or hydrates thereof, characterized in that:

a compound of formula:

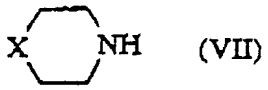


(VI);

in which:

- Ar represents a phenyl monosubstituted or disubstituted with a halogen atom; a (C_1-C_3)alkyl;
- Y represents a methyl, phenyl, tolyl or trifluoromethyl group;
- R_1 represents a chlorine atom, a bromine atom, a (C_1-C_3)alkyl or a trifluoromethyl;

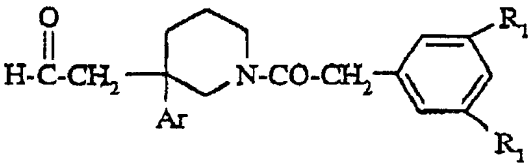
is reacted with a compound of formula:


(VII)

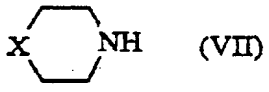
in which X is as defined for a compound of formula (I) in Claim 1, and, optionally, the compound thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

20. Process for preparing the compounds of formula (I) according to Claim 1, the salts thereof and the solvates and/or hydrates thereof, characterized in that:

the compound of formula:


(VIII)

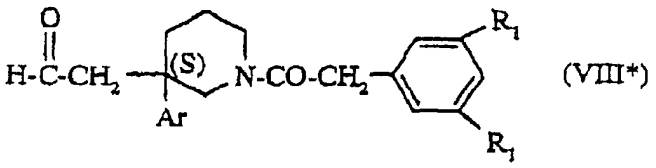
in which Ar and R_1 are as defined for a compound of formula (I) in Claim 1, is reacted with a compound of formula:


(VII)

in which X is as defined for a compound of formula (I) in Claim 1, in the presence of an acid, followed by reduction of the intermediate iminium salt formed by means of a reducing agent, and, optionally, the compound

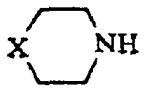
thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

21. Stereospecific process for preparing the compounds of formula (I) according to Claim 1, having the (S) configuration, the salts thereof and the solvates and/or hydrates thereof, characterized in that:
the compound of formula:



(VIII*)

in which Ar and R_1 are as defined for a compound of formula (I) in Claim 1, is reacted with a compound of formula:



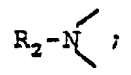
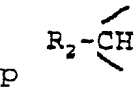
(VII)

in which X is as defined for a compound of formula (I) in Claim 1, in the presence of an acid, followed by reduction of the intermediate iminium salt formed by means of a reducing agent, and, optionally, the compound thus obtained is converted into one of the salts thereof with an inorganic or organic acid.

22. Compound of formula:

(VII)

in which:

- X represents a group of  ; a group  ;
- R_2 represents a group $-CR_3R_4CONR_5R_6$;
- R_3 and R_4 represent the same radical chosen from a methyl, an ethyl, an n-propyl or an n-butyl;
- or R_3 and R_4, together with the carbon atom to which they are attached, constitute a (C_3-C_6)cycloalkyl;
- R_5 and R_6 each independently represent a hydrogen; a (C_1-C_3)alkyl;
- or alternatively R_5 and R_6, together with the nitrogen atom to which they are attached, constitute a heterocyclic radical chosen from 1-azetidinyl, 1-pyrrolidinyl, 1-piperidyl, 4-morpholinyl, 4-thiomorpholinyl or perhydro-1-azepinyl;

and the salts thereof with inorganic or organic acids.

23. Pharmaceutical composition comprising, as active principle, a compound according to any one of Claims 1 to 15, or one of the pharmaceutically acceptable salts, solvates and/or hydrates thereof.

24. Pharmaceutical composition according to Claim 23, containing from 0.1 to 1000 mg of active principle, in unit dosage form, in which the active

principle is mixed with at least one pharmaceutical excipient.

25. Use of a compound according to any one of Claims 1 to 15 or of one of the pharmaceutically acceptable salts, solvates and/or hydrates thereof, for the preparation of medicinal products intended for treating any pathology in which substance P and the human NK_1 receptors are involved.

26. Use according to Claim 25, for the preparation of medicinal products intended for treating pathologies of the respiratory, gastrointestinal, urinary, immune or cardiovascular system or the central nervous system, as well as for pain, migraine, inflammations, nausea and vomiting, and skin diseases.

27. Use according to Claim 26, for the preparation of medicinal products intended for treating obstructive chronic bronchitis, asthma, urinary incontinence, irritable bowel syndrome, Crohn's disease, ulcerative colitis, depression and anxiety.